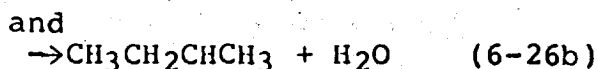
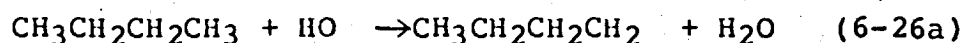


organic species and the free radicals cited above. The reactions of typical hydrocarbon species are now discussed briefly. Throughout the discussion references to more extensive coverages are given.

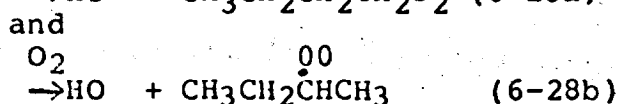
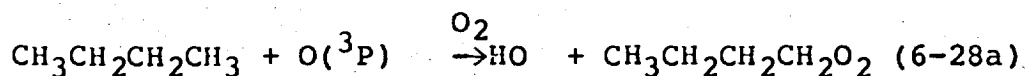
The most important atmospheric reaction involving alkanes is with the HO radical. For n-butane, for example, the reaction is



The alkyl radicals will rapidly add O_2 to form the corresponding peroxyalkyl radicals, e.g.



(subsequently the third body M will not be indicated). A reaction of substantially lesser importance is with oxygen atoms,



The importance of both the HO and $\text{O}(^3\text{P})$ reactions with alkanes is the generation of the peroxyalkyl radical RO_2 , which plays a substantial role in the conversion of NO to NO_2 .

Rate constants for alkane reactions are summarized by Baulch et al.⁹

The atmospheric chemical reactions involving olefins have been widely studied.^{4,5,10} The most important reactions